

MFR/PRVLBR NOTIFIED

COMMENTS: YES 4 NO 12/5/08

OVERRULED; ATTACHED

EXCISIONS/FOIA Hxs. —

DO NOT RE-NOTIFY RE-NOTIFY

## U.S. Consumer Product Safety Commission LOG OF MEETING

**SUBJECT:** Aluminum wiring repair methods and Federal Pacific Electric (FPE) Stab-lok circuit breakers and associated safety hazards

**DATE OF MEETING:** March 18, 2008

**LOG ENTRY SOURCE:** Andrew Trotta, ESEE *AT*

**DATE OF LOG ENTRY:** October 29, 2008

**LOCATION:** U.S. CPSC, Bethesda Towers

### CPSC ATTENDEE(S):

Jay Howell, Office of Hazard Identification and Reduction

Scott Wolfson, Office of Public Affairs

Douglas Lee, Division of Electrical Engineering, Directorate for Engineering Sciences (ESEE)

Russ Roegner, Directorate for Epidemiology (EP)

Kathleen Stralka, Division of Hazard Analysis, EP (EPHA)

Michael Greene, Ph. D., EPHA

Andrew Trotta, ESEE

### NON-CPSC ATTENDEE(S):

Jesse Aronstein, Ph. D., consulting engineer

Eleanor Aronstein

Peter King, AlCopStore.com

Mason Laird, Consumer Federation of America

David Shapiro, Safety First Electrical Contracting, Consulting and Safety Education

**SUMMARY OF MEETING:** CPSC staff met with Jesse Aronstein at his request to discuss his concerns over a March 3, 1983 CPSC Press Release on Federal Pacific Electric (FPE) circuit breakers. Dr. Aronstein indicated that the ambiguity of the wording of the press release has lead to its misinterpretation. He proposed alternative wording that he thinks will clarify the intent of the press release. Dr. Aronstein reiterated his findings on field failures of FPE circuit breakers as a basis for the need to clarify the intent of the CPSC press release. He provided a handout (attached) to support his assertions.

On the topic of aluminum wiring, Dr. Aronstein indicated that he is now ready to endorse the AlumiConn connector as an acceptable alternative to the CopAlum repair where the CopAlum is unavailable or unaffordable. He proposed a complete revision and upgrade to CPSC publication #516.

**Handout from Jesse Aronstein, Ph.D. at March 18, 2008 Meeting**

**Attachment to March 18, 2008 Meeting Log**

**ELECTRICAL ADVISORY COMMITTEE MEETING  
Amended Minutes from April 17, 2007 (as approved by the OHBC  
Board on May 31, 2007)**

**Office of Housing, Buildings & Construction  
Electrical Section  
101 Sea Hero Road, Suite 100  
Frankfort KY 40601**

**MEMBERS PRESENT**

Bobby Hamilton, Chair  
Michael T. Leake  
Garry Sebastian  
Tim Parsons  
Robert Matthews  
Sal Santoro  
Raymond Cornelison  
Gary Osborne  
Michael Billow

**OFFICE OF HOUSING STAFF PRESENT**

Van Cook, Executive Director  
Rodney Raby, State Fire Marshal  
Richard Peddicord, Assistant State Fire Marshal  
Ken Leathers, Chief, Electrical Inspections  
Tommy Young, Electrical Inspector  
Michael Bennett, Staff Attorney  
Jennifer Redmon, Administrative Specialist

**VISITORS PRESENT**

Jim Dunson  
Bill Slone  
Pat Perry  
Mike Sausman  
Joe Dunnigan  
Jeff Siegle

**MEETING CALLED TO ORDER**

**Chair Bobby Hamilton made the motion to call the meeting to order at 9:00 a.m.**

**Federal Pacific Electric Company stab-lok breakers memorandum: Home Inspectors telling homeowners that FPE panels should be replaced due to fire hazard.**

Mr. Ken Leathers received a release concerning FPB panels from US Consumer Product Safety Commission, March 3, 1983 (Release #83-008).

Several members stated that there was no documentation present that alluded to the fact that the panel was a fire hazard yet the Committee itself takes no liability in stating that the panel is a safe panel.

**First motion made to have Ken Leathers with aid of Terry Slade draft letter stating Committee's statement about breaker panel boxes: Robert Matthews**  
**Second motion made to accept: Tim Parsons**  
**Motion carried.**

**South Wing C of State Fair Grounds electrical installation issue:**

Mr. Scott Pulliam presented copies of letters sent to Harold Workman, Kentucky State Fair Board, and Ken Leathers, Chief Electrical Inspector.

On July 7, 2005, Ken Leathers sent correspondence to Mr. Pulliam which addressed all complaints and stated that he would be performing a walk-thru inspection on the facility.

Mr. Pulliam also stated that he sent correspondence to the Attorney General's Office and Harold Workman of the Kentucky State Fair Board again to address work he presented as unsafe.

The Committee members addressed several of the photographs presented by Mr. Pulliam. Committee members concurred that the pictures did not depict an accurate date, progress of the job nor were they in sequence with the lengthy job installation.

Garry Sebastian questioned the filing of a complaint with local jurisdiction. Mr. Pulliam stated that he did not file a local complaint because he had copied several State government entities.

Committee members confirmed through Ken Leathers and Tommy Young that National Electrical Council (NEC) Code was used in the inspection of all work performed on this job.

Mr. Tommy Young, electrical inspector, stated that he made approximately 47 visits to the job site with a common occurrence of reporting four pages of violations per visit. Mr. Young stated that each time he subsequently inspected the job site; the violations he had noted were corrected. He stated that the job was begun in October of 2003 and it was finalized in October of 2005.

**J. ARONSTEIN**

**CONSULTING ENGINEER**

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**HAZARDOUS FPE CIRCUIT BREAKERS**  
**AND PANELS**

***(Updated as of May 25, 2007)***

***Information for Inspectors and Homeowners***

***(Originally Prepared for the 17th Annual Spring Seminar, Feb. 21, 2004  
St. Louis Chapter, American Society of Home Inspectors)***

***Copies of this report may be downloaded at no cost from:***

***[www.inspect-ny.com/fpe/FPECircuitBreakerHazards070525.PDF](http://www.inspect-ny.com/fpe/FPECircuitBreakerHazards070525.PDF)***

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## CONTENTS

PREFACE to the May 25, 2007 Revision .....	1
INTRODUCTION .....	2
1. FPE Stab-Lok® Breakers Do Not Meet Code Requirements .....	4
2. FPE Stab-Lok® Circuit Breaker Test Results.....	5
A. CPSC Tests .....	6
B. FPE Test Results .....	7
C. Southwest Research Incorporated .....	7
D. Underwriters Laboratories Inc. ....	7
E. Recent Testing of Field Samples .....	7
3. FPE Stab-Lok® Combination Breaker/GFI .....	8
4. Non-FPE Stab-Lok® Breakers .....	9
5. FPE Main Breakers.....	10
6. FPE Stab-Lok® Panels .....	10
7. FPE Stab-Lok® Panels With No Main Breaker .....	14
8. Hazardous Failure - an Example .....	15
9. Some Moments in the History of the FPE Problem .....	17
10. Should FPE Panels be Replaced?.....	20
REFERENCES .....	21
Copy of Reference 6 (Business Week Article, "Exxon Buys a Scandal .....").....	22

## **INTRODUCTION**

The underlying reason for the presence of defective Federal Pacific Electric ("FPE") Stab-Lok® circuit breakers in millions of homes today is now publicly known, through a Court finding in a class action lawsuit in New Jersey. For a long time, while this line of circuit breakers and panels were in production, FPE cheated on its testing to cover up the fact that the product did not reliably meet the applicable UL (Underwriters Laboratories, Inc.) safety standard requirements. Because of the cheating, defective product got into the market, past the normal electrical safety system of checks and balances. Having obtained and maintained its UL listings by fraudulent testing, FPE applied UL labels to the product by which they (the manufacturer - FPE) falsely certified that the breakers met the UL requirements. Without the fraudulent application of the UL labels, the defective breakers could not have been marketed, installed in millions of homes, and approved by electrical inspectors. Although the company ceased manufacturing these breakers in the mid-1980's, their defective circuit breakers remain today in millions of homes, presenting an increased risk of fire and injury.

Supposing the circuits in your home were fed by a fuse box, with screw-in fuses. You may have seen these in some homes. You may also know about the unsafe practices of over-fusing (installing a higher-amperage fuse than appropriate for the circuit wiring) or putting a penny in the socket behind the fuse itself -- actions taken to deal with the "nuisance" of fuses frequently blowing on overloaded circuits, or to deal with the lack of a spare fuse. Now, let's assume that an inspector notes some over-fusing and pennies behind some fuses, and waves the warning flag that it is a hazardous condition - a "safety defect". Inspectors, electrical contractors, fire prevention professionals, and real estate agents would agree that these conditions are hazardous (increasing the risk of fire and injury), that the homeowner should be alerted, and that the unsafe condition should be corrected immediately. Red-flagging the Federal Pacific Electric ("FPE") Stab-Lok® panel and its breakers is essentially the identical warning; it is the equivalent of having more than 1/3 of the circuits over-fused and/or with pennies behind the fuses.

Failure to trip properly under overload and/or short circuit is the basic safety defect of the FPE breakers. For example, if an overload or short circuit occurs in the clothes dryer or the circuit feeding it, the breaker is expected to trip open to minimize the resulting fire hazard. But, if it is an FPE Stab-Lok® two-pole breaker, extensive testing (by FPE, CPSC, UL, and others) has demonstrated that it cannot be depended on to trip properly. A substantial portion of the FPE two-pole Stab-Lok® breakers, the type that would feed the dryer circuit, fail to operate properly. A significant portion of them jam and will not trip at all, no matter what overload current is applied. Additionally, there are problems with the FPE Stab-Lok® single-pole breakers and combination breaker/GFI units.

The circuit breaker defects become important if and when there is a short circuit or substantial overload in the downstream circuit. Most breakers in a home are never called upon to trip, and the homeowner's perception is that "the breakers work fine". The same observation could generally be made if there were no breakers (or fuses) at all in the electrical system. In the event of an electrical malfunction, however, our safety may depend on proper operation of the circuit breakers.

## **1. FPE STAB-LOK® BREAKERS DO NOT MEET CODE REQUIREMENTS**

With regard to the electrical system in buildings, all applicable building codes and standards require operational and properly sized (current rating) circuit protection. This is normally accomplished by the installation of either circuit breakers or fuses. Because of their high defect rate, the FPE Stab-lok® circuit breakers do not meet the functional requirements of the electrical safety codes and standards.

The general requirements for installation of circuit breakers or fuses in buildings are in the National Electrical Code ("NEC"), which is a so-called "model code" that is generally adopted all or in part by State and local jurisdictions. The NEC is maintained and periodically updated by a process that is administered by the National Fire Protection Association (NFPA), which also publishes the actual text document. The NFPA does no testing of the components of the electrical system, nor does it approve (or "certify", or "label", or "list") specific brands of electrical equipment as suitable for use under the requirements of the NEC.

Detailed performance requirements for residential circuit breakers are embodied in Underwriters Laboratories' Standard UL489. That standard has served for many years to define the boundaries between acceptable and unacceptable circuit breaker performance. Conformance to the standard is generally indicated by a UL "label", which is applied to each breaker by the manufacturer as its (the manufacturer's) certification that the breaker meets the requirements of UL489. UL allows the manufacturer to do that, after "listing" it (having tested and accepted initial samples) and establishing a periodic inspection and sample testing program (by UL, in addition to the manufacturer's own production line and quality control testing) for that product. UL is paid by the manufacturer for the listing, labeling, and follow-up services. The manufacturer is UL's client. For the FPE Stab-Lok® circuit breakers, UL listing and periodic follow-up testing was actually done by FPE personnel at FPE's facilities, monitored by a UL inspector. UL did not itself independently test the FPE breakers for the listing or "follow-up services" program. UL claimed to be unaware of FPE's fraudulent testing practices.<sup>6</sup>

Facilitated by its fraudulent testing, FPE produced defective Stab-lok® breakers for many years. They falsely applied the UL labels as their certification that they met the applicable UL standard. Without the UL label on them, the breakers could not have been sold, as electrical inspectors would not accept an installation without (UL) labeled equipment. To the inspectors, the label (and UL "listing") is taken as evidence that the product is "suitable for the purpose" under the provisions of the NEC. In the case of FPE's Stab-lok® circuit breakers, however, it was not true.

On the basis of all available test results, it is clear that the FPE Stab-Lok® circuit breakers do not meet the functional requirements of the NEC, State and local codes, or UL489. Nevertheless, some people in the trade (inspectors, engineers, electricians, electrical contractors, and power company technicians) may claim that the FPE Stab-Lok® breakers are in conformance with applicable code(s) because they are (or were at the time of installation) UL "listed and labeled", without regard for the actual functionality. Such statements really say that the electrical distributor did nothing wrong by stocking the product for sale, the electricians and contractors did nothing wrong by installing them, and the electrical inspectors did nothing wrong by approving the initial installation. They are not at fault in that regard. FPE's fraud duped them all, and UL as well.

From an electrical safety standpoint, the fraud has left homeowners and occupants with an increased risk of fire and injury. The defective performance of the FPE Stab-Lok® breakers is not in actual compliance with the NEC or any other electrical safety code.



**A. CPSC Tests** In the 1980 time frame the U.S. Consumer Product Safety Commission (CPSC) investigated the performance of circuit breakers. CPSC performed its own laboratory tests on samples of FPE Stab-Lok® single-pole and double-pole breakers. For these samples, they found that 85% of the double-pole breakers and 39% of the single-pole breakers failed one or more of the UL test criteria. The double-pole breakers that failed to trip at 200% of rated current were considered to be "critical" (safety) failures. This term was adopted for failures to trip at 200% of rated current (and above), and it was based on CPSC-sponsored analysis and testing at the U.S. National Bureau of Standards (NBS, now NIST). The NBS tests demonstrated 200% of rated current to be the threshold of fire ignition hazard for residential wiring in an insulated wall.

Additional tests on 122 two-pole FPE Stab-Lok® breakers in ratings from 30 Amp to 80 Amp were conducted for CPSC by Wright-Malta Corp. These breakers were tested according to the Underwriters Laboratories' (UL) criteria for operation at 135% and 200% of rated current.<sup>2,3,4</sup> The breakers should trip (open the circuit) at these currents within a specified time, with the current applied to either one pole or both poles. (The FPE Stab-Lok® two-pole breakers in ratings below 90 amp are essentially two single-pole breakers ganged together with linked handles, and they may or may not have an internal "common trip" mechanism, which is intended to assure that tripping of one pole causes both poles to open. Older FPE Stab-Lok® two-pole breakers do not have this feature.)

For the Wright-Malta tests at 135% of rated current, 51% of the double-pole breakers failed with individual poles tested, and the failure rate was 25% with both poles tested simultaneously. The failure rates increased to 65% and 36%, respectively, after 500 operations of the on/off toggle handle (a shortened version of the UL mechanical endurance test).

For the test at 200% of rated current, the failure rate was 1% on individual poles tested, and 0% with both poles tested simultaneously. The failure rates increased to 10% and 1%, respectively, after 500 operations of the on/off toggle handle.

From an electrical safety standpoint, the most significant hazard identified in these CPSC-sponsored tests is that many of the two-pole FPE Stab-Lok® breakers may jam when trying to trip from overcurrent on one pole. This is due to mechanical friction in the common trip mechanism. Once the circuit breaker jams, its contacts will remain closed no matter what the current loading. This is serious -- it is a total failure that disables the protective device for that circuit. Essentially, the jammed breaker is exactly analogous to the "penny behind the fuse". This type of failure occurred in about 10% of the two-pole breakers in the test program.

FPE claimed that the jamming was a consequence of the test conditions (toggle operations) and would not occur in actual use. Subsequent testing of samples from homes has disproved that claim. (See Section 2E, below.) The friction changes in the mechanism that causes the jamming occurs in long-term use under normal conditions in homes, not only by repeated on/off toggle operations in the tests.

The balance of the overcurrent failures are similar to "overfusing". For instance, a 30-amp breaker, which is normally expected to trip somewhere above 30 amps and below 40.5 amps (the UL 135% test point), actually doesn't trip until 44 amps. The 30-amp breaker is essentially a 40-amp breaker. This is analogous to the condition of "overfusing", a practice that is universally considered to be unsafe even though it is not as dangerous as a totally jammed breaker (or penny behind the fuse).

Those listed as "jammed" did not trip at any overcurrent level tested, and the jamming was confirmed in most instances by X-Ray inspection of the mechanism, which showed the trip lever released but the electrical contact points still closed.

These recent tests provide performance data for the single-pole FPE Stab-Lok® breakers, both 1/2-width and full-width, and for the 1/2-width double-pole breakers. FPE and others often state or imply that the only known problem within the FPE Stab-Lok® circuit breaker line is with the full-width double-pole breakers that FPE/Reliance called to CPSC's attention. That is not true, however. The recent test results, along with CPSC's own testing, clearly show substantial defect rates across the entire FPE Stab-Lok® residential circuit breaker product line.

The double-pole FPE Stab-Lok® breakers have a much higher rate of jamming (failure to trip at any current) than the single-pole. This reflects the fact that the major cause of the jamming of the double-pole breakers is friction in the "common trip" mechanism. This mechanism does not exist in the single-pole breakers.

The recent testing has also provided data on the 1/2-width FPE Stab-Lok® double-pole breakers, which had not been previously available. The data shows no significant difference between the 1/2-width and full-width double pole breakers; both types exhibit both calibration and jamming failures.

The results of the recent testing clearly demonstrate that the circuit breaker problems are not restricted to the full-width two-pole breakers that were the primary focus of the CPSC investigation. The problems extend across the full Stab-Lok® residential circuit breaker line, including the combined breaker/GFI.

### **3. FPE STAB-LOK® COMBINATION BREAKER/GFI**

Five FPE Stab-Lok® breaker/GFI units were among the field samples tested. Four of them failed. This is not surprising, since the breaker/GFI design is based on the 1/2-width two-pole breaker, which is prone to jamming due to the common-trip mechanism. The single-pole breaker/GFI is essentially a double-pole breaker with one side actuated by a special circuit that reacts to a small (5 milliamp) difference in current between the line and neutral conductors passing through it. When the common trip mechanism causes a jam, it defeats both the circuit breaker and GFI functions. Two of the five units tested jammed. While the sample size is not large, it is nevertheless significant because it was a truly random sample. The five units tested were from different panels in different parts of the country.

## **5. FPE MAIN BREAKERS**

Although there have been incident reports in which FPE main breakers have failed to trip under circumstances in which people thought they should have, there is very little test data available on which to base any conclusion - one way or the other - as to the reliability of the main breakers utilized in FPE Stab-Lok® residential panels. *(It is also important to note that FPE panels in many homes do not have a main circuit breaker. See section 7.)*

Ten FPE 90 and 100 Amp two-pole main breakers (Figure 6) are included in the results presented in Table 2. Four of the ten failed to trip at 135% of rated current as required.

## **6. FPE STAB-LOK® PANELS**

Even if it were possible to replace all of the suspect FPE Stab-Lok® breakers with a more trustworthy type, that would not correct hazardous internal failure modes intrinsic to many of the FPE panels. Seven of the twenty eight FPE Stab-Lok® panels in the present study showed evidence of internal overheating due to this type of failure. The overheating ranged from mild to severe in these failing panels.

The "panel" is the unit within the enclosure, on which the breakers are mounted. The main electrical service feeders (electrically live, from the meter) are connected at the panel, and the panel has an internal conductor system that distributes the power to the individual circuit breakers. The internal conductor system consists essentially of "bussbars" (thick metal bars) that have sockets incorporated or attached, into which to which the breakers' "stab" contacts are inserted. There are many different types of bussbar constructions in FPE panels, three of which are shown in Figure 2.



**A. Copper buss bar with punched openings.**



**B. "Z" clip, clamped to .  
bussbar with 10-32 screw.**



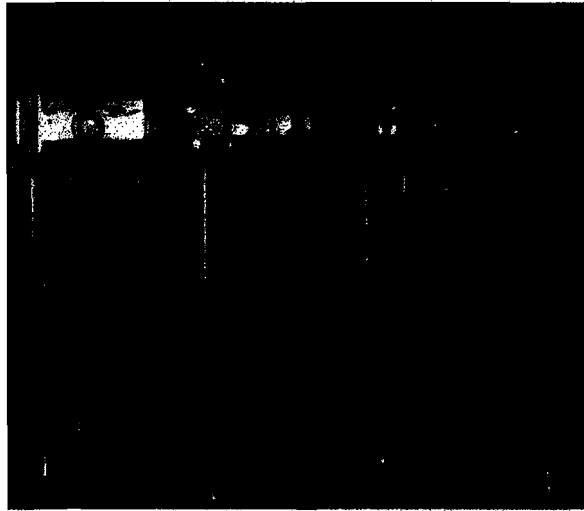
**C. Stab socket on a post,  
attached with an 8-32 steel screw.**

**FIGURE 2 - THREE DIFFERENT FPE STAB-LOK® SOCKET DESIGNS**

Of the three types illustrated, the one shown in Figure 2-C is known to have a high probability of deteriorating and overheating of the stab socket structures when subjected to significant current flow. Each individual stab socket plate is connected to its bussbar via a post (spacer), and the assembly is held together by an 8-32 steel screw. FPE panels with this construction are prone to overheating failure. The seven panels of the present study that showed evidence of serious overheating were constructed this way. One example is shown in Figure 3.

Various material combinations were utilized by FPE in these assemblies. Some bussbars are copper, others are aluminum. Some posts are copper, others are aluminum. The worst case (most likely to fail) is where both the bussbar and the post are made of aluminum, and the best case (least likely to fail) is where both are made of copper. Inspectors (or homeowners, or electricians) have no way of knowing which materials are utilized in any particular FPE panel with this type of construction.

Inspectors can, however, determine if a particular FPE panel has this type of construction, and, to a limited extent, whether it has failing bussbar interconnections that have previously overheated. With the panel cover off, for this type of panel, you can see the ends of the screws holding the stab socket plate as shown in Figure 5. (Note: If you see slotted screwheads, that's a different type of panel construction.) The stab socket plates and the visible ends of the screws should have a bright metallic look. Darkening, discoloration, or signs of corrosion most likely indicate past episodes of abnormal overheating.

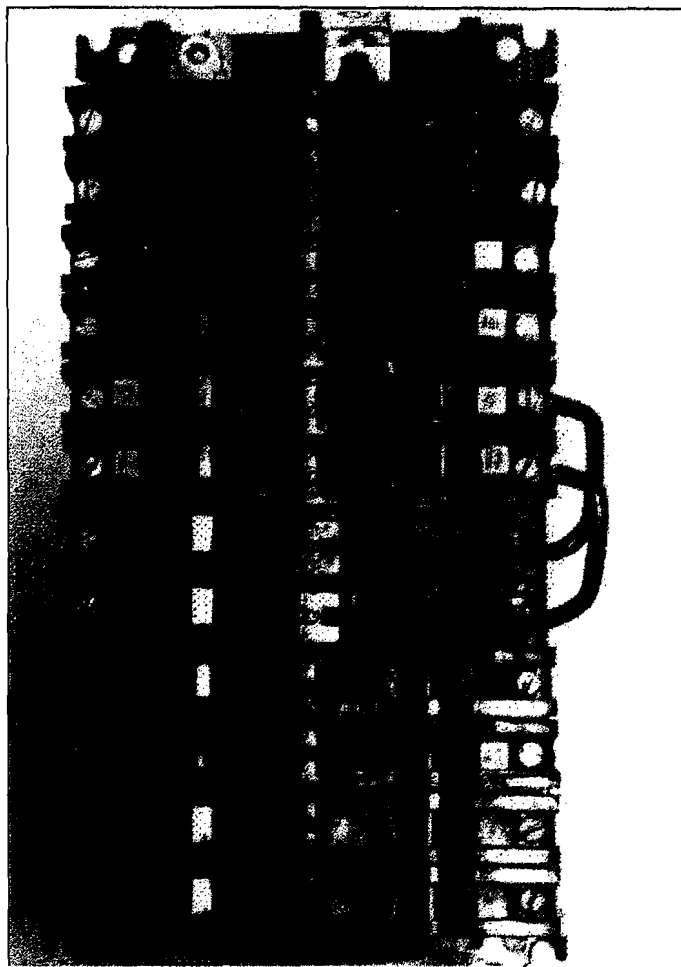


**FIGURE 5 - THE ENDS OF THE SCREWS HOLDING THE STAB SOCKET PLATES ARE VISIBLE BETWEEN THE TWO ROWS OF BREAKERS. THIS IDENTIFIES IT AS A PANEL OF THE TYPE SHOWN IN FIGURE 2-C**

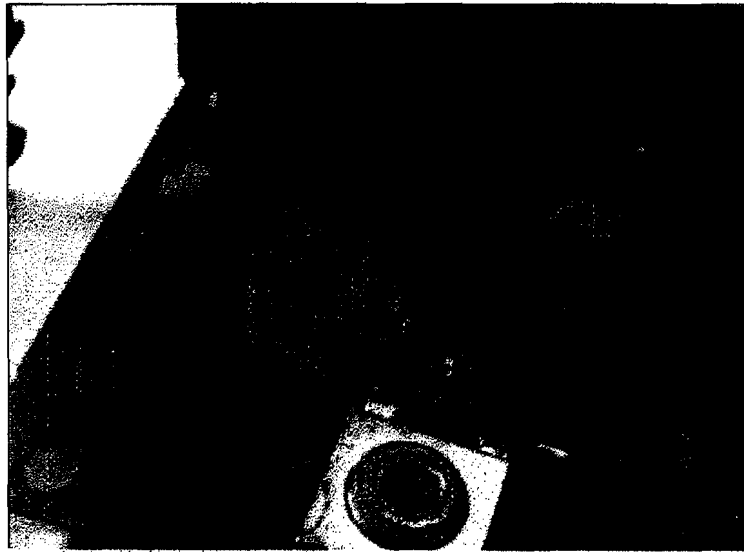
Some FPE Stab-Lok® panels have 100-amp main breakers that feed into the bussbars through the same plate and post system. In this design, the two main breaker output terminals do not have the stab type contact. Instead, each one is screwed down to a plate the same size as the stab socket plate, but which has a threaded hole in it instead of the stab openings. As with the plate and post assembly, the screws clamping the main breaker terminals are size 8-32, which is absurdly small for clamping the terminals of a 100-amp main breaker.

## **7. FPE STAB-LOK® PANELS WITH NO MAIN BREAKER**

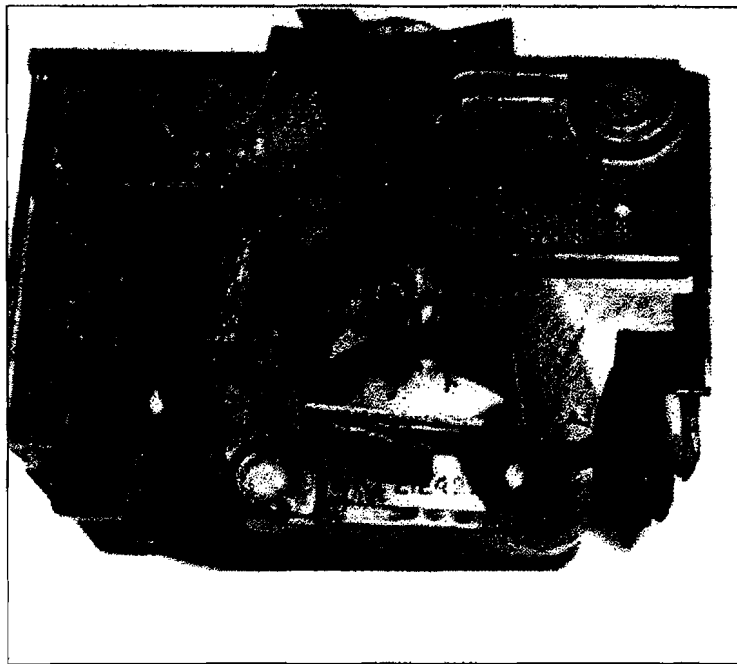
Many of the FPE Stab-Lok® panels that are in homes today do not have any main breaker. This was allowed under the so-called "Rule of Six" in the National Electrical Code (NEC), which states, typically, that "The service disconnecting means ... for each set of service entrance conductors ... shall consist of not more than six switches or six circuit breakers ..." (NEC 1981, section 230-71a, for example.) This reduced the cost of the panel at the time of initial installation, but its nasty side effect is to totally eliminate the safety factor provided by having a main breaker. In the event that a branch circuit breaker jams on an electrical fault, a main breaker would still provide a measure of circuit protection at a higher current trip point. Without the main breaker, there is no circuit protection at all if certain breakers jam. An FPE Stab-Lok® panel with the "rule of six" configuration, normally called a "split bus" type, is shown in Figure 8.



**FIGURE 8 - FPE STAB-LOK® "RULE-OF-SIX" (SPLIT-BUS) PANEL WITH NO MAIN BREAKER. THE JUMPER CABLES ON THE RIGHT SIDE FEED THE LOWER SECTION.**



**FIGURE 10 - THE DAMAGE TO THE INSULATING STRUCTURE OF THE PANEL (FIG. 8) IS MORE CLEARLY VISIBLE WITH THE BREAKER REMOVED.**



**FIGURE 11 - THE FAILED FPE STAB-LOK® DRYER BREAKER (UPPER RIGHT, FIG. 8)**

In early 1983, CPSC closed its investigation of FPE breakers, and issued a press release to that effect.<sup>9</sup> The Commission's press release indicates that it was "unable at this time to link these failures to the development of a hazardous situation," that "The Commission staff believes that it currently has insufficient data to accept or refute Reliance's position," and that they did not have the money to develop the required data. The press release provides no information as to the performance defects that CPSC found in their tests, and no information on the possible hazardous consequences.

CPSC did not have the data necessary to rigorously prove a direct relationship between the defective breakers and specific incidents of fire, injury and death. A rigorous connection between defects and injury was required, since the manufacturer of the defective breakers steadfastly refused to cooperate with CPSC toward any recall or consumer safety advisory, claiming that there was no hazard associated with their breakers. The manufacturer essentially challenged the agency to develop the data required to a level that could prevail in court, or drop the issue. CPSC did not have sufficient resources to support the multi-million dollar program that would have been required at that time to develop the data connecting breaker malfunction to injury, and it closed its investigation of the defective breakers.<sup>9</sup>

CPSC's inability to "connect the dots" between FPE Stab-Lok® circuit breaker malfunction and fire/injury incidents stems primarily from the fact that fire investigation and reporting is focused on the cause (ignition source) and its origin (location in the structure). Conventional fire investigation and reporting seldom goes to the depth required to prove with hard evidence that a circuit breaker did or did not function properly. As an example, a fire might start in a bedroom as a result of a short circuit in a table lamp. A fire investigator may suspect that circuit breaker malfunction was a contributing cause, but the ability to prove it is generally lacking. For CPSC, the cost of developing the required methodology, protocols, investigator training, and equipment, and then implementing a program to develop the required data was beyond the reasonable reach of the agency's budget.

Two important events had occurred prior to the Commission's vote that no doubt influenced their decision. In 1981, President Reagan took office. The political climate under the new administration was very much pro-industry, and CPSC was on the chopping block from a budget standpoint. The Commission did not have - and was not likely to get - the funds required for a protracted technical and legal battle with FPE/Reliance.

Equally important as background is that, in early 1982, CPSC lost a major battle in court on another electrical product - aluminum wiring. Kaiser Aluminum had challenged CPSC's jurisdiction over house wiring, claiming that it was not a consumer product. After a seesaw series of court decisions and appeals, Kaiser ultimately prevailed. Irrespective of any demonstrated hazard, the final ruling was that CPSC did not have jurisdiction unless it could prove that a substantial percentage of new home buyers contracted directly with the electricians for the installation of the wiring system. That is generally not the case. It is much more common to have the electrician working under contract to the builder or general contractor. After spending a significant portion of its energy and budget on that project over a period of about eight years, CPSC had to abandon its case on aluminum wiring hazards due to that ruling.

In terms of the contractual relationships in home construction, the service entrance panel is analogous to the aluminum wiring. Although other aspects are quite different, the Kaiser appeal could serve as a model for FPE. No matter what level of hazard CPSC might be able to demonstrate associated with the defective Stab-Lok® breakers, they had some chance of losing if FPE chose to challenge their jurisdiction over the product. A precedent of a sort had been set in the aluminum wiring case.

The anonymity of the author together with the disclaimer regarding IAEI agreement with the article's content make this article very unusual among articles in IAEI News. Nevertheless, electrical inspectors, having read the article in their own professional organization's publication, are likely to reflect the article's position when dealing with inquiries on this subject. Considering the New Jersey Court's finding of fraud on the part of FPE, the article that FPE/Reliance provided to IAEI news may be viewed as an extension of the fraud -- an effort to "whitewash" a serious breach of corporate and individual ethics and help protect the companies involved.

Presently, there is a class action lawsuit under way against FPE/Reliance in New Jersey. This legal action, initiated about ten years ago, has documented and proven FPE's fraud, that they (FPE) misrepresented to the public that their circuit breakers met the applicable (UL) standards when, in fact, they did not.<sup>11</sup>

### **10. SHOULD FPE STAB-LOK® PANELS BE REPLACED?**

If you inspected your own home and found that it had a fuse box with 1/3 of the circuits over-fused or with pennies behind the fuses, how long would it be before you had it corrected? Would you sleep tight without it being corrected? Would the fact that your house had not had any problem (burned down yet) because of the over-fusing and pennies influence your decision as to whether or not to take corrective action?

Unlike over-fusing and pennies behind the fuses, defective FPE Stab-Lok® breakers cannot be spotted by an inspector or tested by an electrician or homeowner. Without doing a functional test (at overload and short-circuit conditions) on each breaker, one pole at a time for the two-pole breakers, one cannot actually determine the present operating characteristics of a breaker. Which of the 20-Amp breakers really have the trip characteristics of 30-Amp breakers (same as over-fusing)? Which will not trip at all (same as a penny behind a fuse)?

Most electricians or electrical inspectors can only look at the breakers ("they look OK to me"), and operate the toggle ("they click on and off OK"). But without doing live-current functional testing on all of the breakers, it is impossible to determine which of the breakers in the panel are defective. Will they all trip safely and properly on electrical overload or short circuit? Electrical contractors and inspectors are generally not equipped to do that type of testing, and homeowners or potential purchasers are not likely to have the required budget for extensive specialized testing. In fact, thorough testing would most likely cost far more than changing the panel.

The presence of an FPE panel in a home should be classified as a "Safety Defect". The FPE Stab-Lok® breakers are primary safety devices of questionable operating reliability. It is not quite correct to call the non-tripping breaker a "fire hazard". That term should be reserved for the electrical failure that causes ignition. The breaker's function is to stop certain electrical sequences that could, if allowed to proceed, lead to fire in the building. If an electrical fire hazard involving excess current develops somewhere in the building, the breaker is supposed to trip and minimize the possibility of fire ignition. If the breaker is defective, fire is more likely to result.

There is no question but that the FPE Stab-Lok® panels should be replaced. There is no practical and safe alternative.



66 BUSINESS WEEK: July 21, 1980

## Exxon buys a scandal along with a company

Exxon Corp.'s \$1.2 billion purchase of Cleveland's Reliance Electric Co. last year was designed to give Exxon a base for developing a new energy-saving technology to improve the efficiency of electric motors. What the purchase seems to have bought as well, however, is custody over a burgeoning scandal that involves the charge that defective electrical equipment may have been installed in perhaps 10% of all homes built or renovated over the past decade or more.

The charge, startlingly enough, is being made by Reliance itself. In a little-noticed suit filed in U. S. District Court in Cleveland on June 26, the company accused its own subsidiary, Federal Pacific Electric Co., of having employed "materially deceptive and improper manufacturing, testing, and certification practices" in the production of one of the nation's most widely used lines of circuit breakers. The suit asked the court either

to rescind Reliance's March, 1979, purchase of Federal Pacific from uv Industries Inc. or to order uv to repay the \$345 million purchase price, plus damages.

A week later Reliance notified the Consumer Product Safety Commission (CPSC) that in-house testing of its Stab-Lok line of two-pole, 220-volt circuit breakers indicates that some are prone to failure after repeated use "at relatively low over-current conditions." Reliance says it has not yet determined whether there is a significant hazard in using the device, and there have been few public complaints against it. But the company has stopped shipment of the product and requested distributors to halt further sales until tests are completed. Other unspecified problems also have been identified on three-pole Stab-Lok and molded-case circuit breakers. Says Reliance President B. Charles Ames: "The circuit breaker business at Federal Pacific has virtually ground to a halt."

**Who is responsible?** That may be only the beginning. The items involved cost only \$16.60 apiece. But if the CPSC determines that they should be recalled, the outlay could be enormous since it would require the services of professional electricians. The cost per house could be as much as \$100, trade sources say.

The underlying question in the Cleveland case is who bears the responsibility for this substantial potential liability. The principal defendant is uv Industries, which, after its sale of Federal Pacific, profitably liquidated itself last year over the strong objections of its major stockholder, Sharon Steel Corp. Following the liquidation, Sharon, controlled by Miami financier Victor Posner, bought the remaining assets—and presumably the liabilities—of uv for \$518 million in cash and debentures. Distribution of the proceeds was scheduled to take place on July 21, but Reliance is asking for the imposition of a "constructive trust" to prevent "dissipation" of uv's assets. Aside from Sharon's 22% interest in uv's liquidating trust, most of the company's shares are now in the hands of Wall Street arbitrageurs.

**Procedural delays.** uv Chairman Martin Horwitz strongly denies that he knew anything about Federal Pacific's alleged problems and says the case will be contested. A hearing on a motion to dismiss or transfer the case to New York was set for July 11, probably only the first of a long series of procedural maneuvering.

The Reliance complaint is vague in its allegations of what went on at Federal Pacific. Reliance charges that the company's financial success "was due substantially, if not entirely, to a pattern of materially deceptive and improper practices in the manufacture, testing, and sale" of its circuit breakers. Specifically,

the suit claims Federal Pacific used such practices to obtain certification for its equipment from Underwriters Laboratories (UL), whose label is usually required for a product to meet local electrical codes. The CPSC has not yet been told details of the alleged deceptive practices, but a commission staff engineer who

## Exxon's new company is suing its own subsidiary for 'deceptive' practices

once worked for UL suggests that the practices may have involved rigging equipment at Federal Pacific's own test facilities in a way that would mislead UL's on-site inspectors.

UL professes surprise at the charge that its inspectors were somehow duped, and its general counsel, David Hoffman, insists that "there is no evidence to support the conclusion that products out in the field pose a substantial hazard to the user." Hoffman further says that because relationships between UL and its client, Federal Pacific, are "proprietary," he cannot even publicly confirm Reliance's open statements that its subsidiary's circuit breaker products were delisted after failing various tests.

The delisting occurred after UL changed testing procedures for circuit breakers following CPSC concern that the product might pose fire hazards. The commission last year asked the National Bureau of Standards to design new test equipment to determine performance under actual conditions in the home. The Reliance case could thus turn into an inquiry affecting the entire \$600 million circuit breaker industry.

It was apparently UL's action last fall in delisting nearly 400 circuit breaker labels that started the whole legal process. Reliance says it was originally told that such delisting was routine. But sales had slid so much by early May that it was obvious that the real problem was not the failure of circuit breakers to gain UL approval but "deception" in obtaining certification over a long period of years.

Reliance has suspended with pay Federal Pacific President Harry E. Knudson Jr. and four other key executives. "The men are long-term employees and their integrity is not being called into question," Reliance said in a statement distributed on July 1 to all Federal Pacific employees. Contacted at his home in Watchung, N. J., Knudson refused comment.

In the early 1980's, CPSC investigated Federal Pacific Electric (FPE) circuit breakers and found that they did not reliably trip as required. Under certain conditions some would jam completely. CPSC did not have the data necessary to rigorously quantify the relationship between the defective breakers and incidents of fire, injury and death. A rigorous connection between defects and injury was required, since the manufacturer of the defective breakers steadfastly refused to cooperate with CPSC toward any recall or consumer safety advisory, claiming that there was no proveable hazard even though their circuit breakers did not operate as intended. The manufacturer essentially challenged the agency to develop the data required to a level that could prevail in court, or drop the issue. CPSC did not have sufficient resources to finance the work required to connect FPE breaker malfunction to specific injuries, and the agency closed its investigation of the defective breakers. (CPSC press release, March 3, 1983.)

The inability to "connect the dots" between circuit breaker malfunction and fire/injury incidents stems primarily from the fact that fire investigation and reporting is focused on the cause (ignition source) and its origin (location in the structure). Conventional fire investigations seldom go to the depth required to prove that a circuit breaker did or did not function properly. As an example, a fire might start in a child's bedroom as a result of a short circuit in a table lamp. A fire investigator may suspect that circuit breaker malfunction was a contributing cause, but the ability to prove it is generally lacking. For CPSC, the cost of developing the required methodology, protocols, investigator training, equipment, and then implementing a program to develop the required data was beyond the reasonable reach of the agency's budget. The opening paragraph of the 3/3/83 press release ambiguously conveys an entirely different message, however:

*"The Consumer Product Safety Commission announced today that it is closing its two year investigation into Federal Pacific Electric Stab-lok type residential circuit breakers. This action was taken because the data currently available to the Commission does not establish that the circuit breakers present a serious risk of injury to consumers."*

How many different ways can that paragraph be interpreted? Considering the information that CPSC had at the time, and the additional information that has since been developed, that paragraph is misleading, and it encourages consumers to retain, rather than replace, circuit breakers that have been proven to be seriously defective. The information that CPSC had at the time is as follows:

1. Extensive test data from CPSC's own lab, FPE, Reliance Electric, Southwest Research Institute, and Wright-Malta Corp. (contract testing for CPSC) identified the nature and extent of the breaker defects. There was no contradictory test data. Both new and used breakers (from homes) were tested
2. Initial statistical analysis toward estimating fires and injuries due to the defective breakers.
3. Knowledge that the defects extended over a broader portion of FPE's product line than had been reported by FPE and/or Reliance.
4. Work by NBS (National Bureau of Standards, now NIST), both theoretical and experimental toward determining the threshold of overcurrent for fire ignition in residential wiring.

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Richard Stern  
Office of Compliance  
U.S. Consumer Product Safety Commission  
4330 East West Highway  
Bethesda, MD 20814

April 3, 2006

Subject: FPE Circuit Breakers - CPSC 1983 Press Release Confusion and Misrepresentation

Dear Mr. Stern:

Although the subject CPSC FPE press release was issued almost a quarter of a century ago, it is currently being used to justify keeping defective FPE "Stab-lok" circuit breakers in homes across the country. This CPSC press release is unique in the field of electrical safety, as it is the only published public statement by an authoritative source to suggest that circuit breakers that fail to operate properly do not increase the risk of fire damage and personal injury. CPSC stands alone in the world of electrical and fire safety on this point.

Ample evidence exists to demonstrate that FPE breakers and panels are actually failing and contributing to hazardous incidents in homes. My previous letter (March 7, 2006) contained 50 examples of failure incidents of FPE equipment, some of which resulted in fire and personal injury. I previously provided up-to-date test data on FPE circuit breakers from homes across the country that shows a very high defect rate for such a critical safety device.

Consumers are most often alerted to the safety defects of FPE circuit breakers at the time of sale, modification, or inspection of a home. Many electricians and home inspectors warn present and potential homeowners of the defective performance of FPE breakers. Countering such warnings, some realtors, electricians, and inspectors state that there is no safety exposure attributable to FPE breakers and therefore no reason to replace them. The underlying basis for that position invariably includes an erroneous interpretation of the CPSC 1983 press release.

Except for the CPSC press release in question, it is universally accepted that circuit breakers which do not operate properly represent an increased risk of fire and injury. That is clearly stated, for instance, in the following quote from a Canadian Safety Advisory Bulletin regarding a circuit breaker recall by CSA and Schneider Canada (which, coincidentally, is the present manufacturer of the "Stab-lok" line of circuit breakers):

*"In some circumstances these breakers may not trip. ... If the circuit breaker does not perform as intended, there is a potential for property damage and/or personal injury." [1]*

As an important example of its misuse, the CPSC press release serves as the cornerstone of an article that appeared in the May/June 1999 issue of IAEI News (the magazine of the International Association of Electrical Inspectors). The entire CPSC press release is reprinted at the end of the article in support of the position that electrical inspectors should disregard information that implies that there are safety problems associated with FPE circuit breakers. [4,5] On the basis of that relatively recent article, many jurisdictional electrical inspectors take the position that, according to CPSC, there is no problem with FPE breakers. The article's success in delivering that message depends on the fact that few people reading the article will actually take the time to read the full text of the CPSC press release, and, even if they do, they are likely to misinterpret its message.

The body of the IAEI article misrepresents the CPSC press release in that it quotes only the statements that support its message. Some people may catch that if they bother to read the full text of the press release, but most will not. It should be noted that the article was placed in IAEI News on behalf of FPE and its successor companies. The article is unlike others in the magazine in that it contains a disclaimer by IAEI and the author is not identified by name. The article says that its unnamed author was the quality control manager for FPE. (It should be mentioned that FPE recently was judged guilty of fraud in a class action lawsuit in New Jersey. The company was found to have committed fraud by labeling and marketing their circuit breakers as meeting the applicable UL standard when, in fact, they did not.)

From an electrical safety standpoint, the major consequence of the ambiguous CPSC press release is confusion among homeowners, electricians, and inspectors as to whether or not the FPE circuit breakers are defective and should be replaced. Following are some examples.

*"I have recently purchased a home in the city of Springfield, MA. During the home inspection my inspector brought to my attention the Federal Pacific Panel. He warned us of the possible fire hazard associated with these specific panels. ... The seller checked with local electrical inspectors and was informed that the panel met code for existing equipment. ..." [6]*

*"I am in the process of purchasing a house and my inspector pointed out that the house has a Federal Pacific electric panel. The seller refuses to replace it. ... The thing I thought was interesting was that the only information that even remotely supported the safety of the panels, the CPSC press release, really only said that the CPSC decided not to pursue the issue, not that they really said they are safe. ..." [7]*

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Richard Stern  
Office of Compliance  
U.S. Consumer Product Safety Commission  
Washington, DC 20207-0001

March 7, 2006

Subject: FPE Circuit Breakers - Field incidents of fire and personal injury.

Dear Mr. Stern:

Regarding my request for CPSC to update its information on FPE circuit breakers, you have asked for supporting information on two points; that failing FPE circuit breakers are contributing to fire and personal injury losses, and that CPSC's 1983 press release on its FPE investigation is being misinterpreted and/or misused. This letter responds to the first point, and a companion letter will follow responding to the second.

Following are 50 summary accounts of some of the incidents that I am aware of. Most of these come to me via Mr. Daniel Friedman, who maintains a website for home inspectors and homeowners. Copies of the original documents are enclosed. Please note that the names and EMail addresses of the people involved should not be used or made public without their consent.

The hazards that are depicted in these incident reports are predictable from the results of the original CPSC investigation. I trust that this collection of fire and incident reports will motivate CPSC to revise its outdated and ambiguous consumer safety information on FPE breakers and panels.

Yours truly,

*[original signed by]*

Jesse Aronstein, Ph.D, P.E.

1. Newspaper Article, 2/3/99, "Home Fire Attributed to Circuit Breaker" (NJ, Dateline Journal)

"A Washington Avenue fire may have been caused by a faulty circuit breaker that has a long history of being undependable according to Fire Prevention Officer David Meisenberg, ..." "... when rafters in the space between the attic and the ceiling of the room below caught fire from overheating wires." "...what probably happened at the Washington Avenue home is that the circuit breaker did not stop the flow of electricity through an abnormally stressed circuit. The wires overheat, like those in a toaster. Instead of burned toast, burned beams resulted, since the wires were tacked to them in accordance with the code. ..." "...identified the trouble prone switch box as an old Federal model ..."

7. EMail 8/19/02

"I had the fuses in our home replaced by a Federal Pacific panel and breakers approx. 25 years ago. There have been 3 occasions when I thought the breaker should have tripped and it did not. The last time this happened was about 3 weeks ago. I consulted a electrician and he stated that these breakers are defective and should be replaced. ..."

8. EMail 10/22/02

"This story really helps to put in perspective that experiment that Alan, John, and I did a few years ago, where the FPE breakers wouldn't trip even though the service wires were whipping around from the high currents being carried through those breakers."

9. EMail 12/24/02

"... A gal in her 90's had an electrical fire a few nights ago. .... I removed a burnt-up 240v electrical baseboard heater and discovered that the circuit remains hot with the main switched off. .... It is a 200 Amp (doublethrow 100 amp) Federal Pacific Electric breaker. ..."

10. EMail 4/30/01

"I have made a report that has opened up a lot of discussion and concerns about FPE breakers and panels. These are located in all the ICBM sites. It seems (nobody is admitting, yet) a bad fire took place at one of the sites and the strong suspect is the FPE breaker/panel. ..."

11. EMail 5/2/01

"My neighbor has a 1974 mobile home, the FPE panel is in...    ... The Main breaker switch on the panel has been tripping during operation of - or when turning up the thermostat on - the furnace. The circuit breakers (4 ganged to two of 2 ea.) have not been tripping. Only the Main trips. ... "

12. EMail 5/14/01

" ... Just as I was screwing down the panel it blew up and flames shot out. It kept on arcing and buzzing. It kept on going and the main breaker didn't trip. Finally, I heard a power line fuse blow somewhere in the neighborhood and it finally stopped. ... "

17. EMail, 2/7/04

"... I just replaced a Stab Lock panel on 2/4/04. I've had some problems with breakers fail to trip."

18. EMail 7/3/04

"Here is a picture of a FPE panel where the aluminum single strand wire overheated for the AC condenser while I was inspecting it and the breaker did not trip. I tripped the breaker manually three times before the condenser would shut off."

19. EMail, 9/13/04

"I just found and read your articles about faulty circuit breaker boxes. They were very interesting to me as our house in Madera California burned down in Oct. of 1980 due to a faulty Reliance/Exxon circuit breaker. (It didn't trip.) Our fire inspector was Sam Garza who found the problem. Our insurance company (Farmers) ended up winning a lawsuit against Reliance/Exxon ..."

20. EMail 12/19/95

"I am a electrical contractor in south eastern Idaho ... my experience with FPE panels is they will not trip which causes fires and numerous other problems."

21. EMail 3/30/05

"... I found out for myself these things do not work. I was fortunate there was no fire. Had I not been there when it happened, there probably would have. It does not trip."

22. EMail 2/23/03

"... Also, we recently installed a window air conditioner in the master bedroom. We have used it plugged into a 15 amp wall duplex. At first it would trip the breaker if anything else plugged into the circuit was turned on. .... Recently, I checked it by turning on other appliances with the AC in operation. The 15 amp breaker did not trip but the AC seemed to load down when the compressor came on. Turning off other appliances on the circuit made the AC resume normal operation. In the test, the circuit breaker did not trip. ..."

27. EMail 2/3/98

" ... Back in late 1981 or early 1982 I accidentally drilled into my range feeder. Although I had recently exercised my breakers, and in spite of the fact that I vaporized the tip of an Irwin Speedbore drill bit, and about 3/8 inch of one side of a No. 6 service entrance cable, neither the feeder nor the 150 amp main tripped."

28. EMail 11/22/97

" ... I have tested a 20 amp FPE breaker with 72 amps on a 12 gauge wire. The explosion that occurred when I tried to turn off the breaker left permanent scars on my right hand and left arm. Also, a 3 pole 70 permitted a 10 HP 3 phase motor to melt the Allen Bradley Contactor, the load wires, and part of the line wiring, without tripping. The motor melted internally. ...

29. EMail 10/16/9

" ... Federal Pacific Electric ... I have some experience with them that may be interesting to you.

I have been working on making portable circuit breaker testers for a few years now. I tested one of them on my home' panel's breakers and it worked great. Then I went to my parents' house to show them the great thing their son had mad and no matter what I did their breakers did not respond (they would not trip). ... I did experiments where I would drop an 800 amp resistive load (virtually a short circuit) for a short period of time and also where I placed a 40 and 80 amp resistive loads for extended periods of time. I even wired up a separate circuit next to the panel with 12g wire so I wouldn't have to take the old wiring into account.

Nothing had any effect. They behaved as if they were pieces of wire. In fact, I have not been able to get them to trip under any circumstances! ... I purchased new FPE breakers, but they performed no better. ... Personally I can't believe there is still any sort of debate about all this. It's crazy."

30. EMail

"Back in 1993, my employee with ten years experience had to tackle a Federal panel. The problem was the main breaker had burnt up and it was during the winter months here in NJ. Being that we did not have a replacement he bypassed the main. After getting the power back on, as he was pushing and reseeding the breakers and all of a sudden the panel blew up in his face causing him to have first and second degree burns on his face and hands. Although bypassing the main wasn't the smartest thing he had done but for a temporary solution getting the power back on so that the pipes would not freeze. Just so you know this job was done at 11:30 PM so that a panel change or service change was out of the question. ... There is no doubt in my mind that Federal Pacific breakers and panels are dangerous ..."



37. EMail 8/15/97

"In all my years as an electrician, since 1978, I have never witnessed anything so unreliable. I've seen 20A single pole breakers with dead shorts that just sat and buzzed and stank, but they did not trip. ... "

38. EMail 11/8/98

" ... My home was equipped with Federal breakers and on the morning of October 24th of this year they nearly caused a serious loss ... Life! The circuit that was supposedly "protected" failed to trip causing a fire in my sons bedroom and had he not awakened because of the heat and alerted the household to the fire, we surely would not be here today. ... "

39. EMail 3/25/98

"Dan, ran into a FP "stab-lok" yesterday. House built in mid 1960's, evidence of scorching at the main breakers behind the dead front panel. ..."

40. EMail 5/13/98

" ... An inspector I helped train in the Reading PA area was changing a door frame in his basement. With the jamb removed he gazed into the wall cavity and was dumbfounded when he observed that the wiring within the wall cavity was devoid of any insulation. It had all burned away. He called me to discuss this. My first question was what type of panel did he have? Federal Pacific Stablocks. The fried circuits were for his basement shop where he had always been amazed that he could run so many tools simultaneously and never cause the breakers to trip. ... "

41. EMail 8/4/98

" ... my wife was home doing the laundry, when all of a sudden the dryer was smoking profusely. She immediately pulled the plug and called me. I had her check the circuit breaker and sure enough, it was not tripped. The dryer motor was completely burned out. ... "

42. EMail 2/4/03

" ... I recently installed a ceiling fan and accidentally shorted the circuit, and no breaker kicked. ... "

47. EMail 3/8/04

"I am a homeowner who was looking for a replacement breaker for my panel and came across your information concerning the Federal Pacific double pole breakers. Approximately a year ago I had a 30 amp double pole that had actually been on fire enough to have charred the plastic. This was a breaker for my clothes dryer. ..."

48. EMail 3/12/03

"Recently there was a minor electrical fire in my house. ... The equipment is from Federal Pacific."

49. EMail 2/13/06

" ... and one of the Stab-Loc connectors had been previously arcing and had melted. ..."

50. EMail 5/10/97

" ... I do have one FPE tale to tell: A few years ago I was working on an old split bus panel. A 2 pole breaker was open circuited. There being no main in a split bus I began to pry out the offending breaker. To my horror I saw, too late, that the breaker had burned out leaving nothing but charred bakelite ... "

SUPERIOR COURT OF NEW JERSEY

CHAMBERS OF  
BRYAN D. GARBUO  
JUDGE



MIDDLESEX COUNTY COURT HOUSE  
P.O. BOX 988  
NEW BRUNSWICK, NEW JERSEY 08903-1888

MEMORANDUM OF DECISION ON MOTION  
Pursuant to Rule 1:6-2(f)

TO: Jeffrey L. Chase, Esq.  
James Crawford Orr, Esq.  
Gerald A. Lilloia, Esq.

RE: Yacout v. Federal Pacific, et. al.  
MID-L-2904-97

NATURE OF MOTION: Plaintiffs' Motion for Summary Judgment,  
Defendant Federal Pacific's Motion for  
Summary Judgment, and Defendant Reliance  
Electric Company's Motion for Summary  
Judgment

Having carefully reviewed the moving papers and any response  
filed, I have made the following findings of fact and conclusions  
of law in support of my determination:

Plaintiffs' motion for summary judgment is granted as to the  
issue of whether FPE violated the Consumer Fraud Act.  
Plaintiffs' motion for summary judgment is denied on the issue of  
whether Reliance violated the Consumer Fraud Act. FPE's motion  
for summary judgment on the statute of limitations issue is  
denied. Reliance's motion for summary judgment as to the issues  
of successor liability and the statute of limitations is denied.

Plaintiff is entitled to summary judgment on the issue of  
whether Defendant FPE violated the Consumer Fraud Act. The  
Consumer Fraud Act provides in part:

(the act, use or employment by any person of any unconscionable  
commercial practice, deception, fraud, false pretense, false  
promise, misrepresentation, or the knowing, concealment,  
suppression, or omission of any material fact with intent that  
others rely upon such concealment, suppression or omission, in  
connection with the sale or advertisement of any merchandise or  
real estate, or with the subsequent performance of such person as

others rely upon such concealment, suppression or omission, in connection with the sale or advertisement of any merchandise or real estate, or with the subsequent performance of such person as aforesaid, whether or not any person has in fact been misled, deceived or damaged thereby, is declared to be an unlawful practice . . . .

N.J.S.A. 52:8-2 (emphasis added).

The statute indicates that the subsequent performance language only applies to the person making the original representations to the consumer. See Anrunziata v. Miller, 241 N.J. Super. 275, (Ch. Div. 1990) ("subsequent performance" language refers to an affirmative representation of a future act by the promisor); See also D'Ercola Sales, 206 N.J. Super. at 25-31 (finding that "subsequent performance" language applies to actions of the original seller of product who subsequently disavows a warranty given in conjunction with original sale). However, if Reliance is determined to have successor liability, then Reliance stands in the shoes of FPE in that Reliance and FPE will be considered one and the same. Thus, while the FPE circuit breakers were advertised, warranted and sold by FPE, if Reliance is determined to have successor liability, then Reliance is the person making the original misrepresentations to the consumers. Accordingly, Reliance would be "such person" within the meaning of the Act. On the other hand, if Reliance is not determined to have successor liability, then Reliance is not "such person" within the meaning of the act. Therefore, this issue must await a full hearing on the issue of successor liability.

Finally, if successor liability is found to exist, any act on the part of Reliance that implicates the Consumer Fraud Act would necessarily be considered continuous/ongoing conduct on the part of FPE/Reliance. Therefore any concealment on the part of Reliance regarding the fraudulent nature of the UL labels, would be considered continuous and thus, would impact upon Defendants' statute of limitations defense.

Defendants also seek summary judgment based on the statute of limitations. This relief is denied. A claim for a violation of the New Jersey Consumer Fraud Act must be brought within six years from the date on which the claim accrues. N.J.S.A. 2A:14-1; See Mirra v. Holland America Line, 331 N.J. Super. 86, 90 (App. Div. 2000). Plaintiffs complain that Defendants sold them circuit breakers with fraudulent UL labels. Thus, Plaintiffs' claims accrued when the circuit breakers were sold. Therefore, for some members of the Plaintiff class, the statute of limitations began running as early as 1965, well beyond the six year statute of limitations period. Nevertheless, the discovery rule can be applied to postpone the accrual of a claim when a plaintiff does not and cannot know the facts that constitute an actionable claim. Grunwald v. Bronkesh, 131 N.J. 483, 621 A.2d

lack standing to assert a claim under the Consumer Fraud Act. In Chattin v. Cape May Greene, 216 N.J. Super. 618 (App. Div.), cert. denied, 107 N.J. 148 (1987), the Appellate Division held that subsequent purchasers of homes containing allegedly defective doors and windows could not bring claims under the Consumer Fraud Act because they were not the people to whom the misrepresentations had been made. Absent an assignment from the original purchaser, subsequent purchasers of homes and buildings that contained the FPE circuit breakers cannot bring a claim under the Consumer Fraud Act because they were not the people to whom the misrepresentations were made. As a result, Defendants are entitled to summary judgment on these claims.

The Defendants also seek summary judgment for post 1976 claims. This relief is denied. The case of Katz v. Schacter, 251 N.J. Super. 467 (App. Div. 1991), wherein the Appellate Division held that misrepresentations made by a real estate broker prior to a 1976 amendment to include real estate transactions, were not actionable when the misrepresentation was discovered after 1976, is not applicable to this case. The matter at hand does not deal with the misrepresentations of real estate brokers and therefore, Katz is not relevant to this matter.

In light of the foregoing discussion, Plaintiffs' motion for summary judgment is granted as to the issue of whether FPE violated the Consumer Fraud Act. Plaintiffs' motion for summary judgment is denied as to the issue of whether Reliance violated the Consumer Fraud Act. FPE's motion for summary judgment on the statute of limitations issue is denied. Reliance's motion for summary judgment on the issues of successor liability and the statute of limitations is denied. Defendants Federal Pacific Electric and Reliance's motions for summary judgment are granted as to any claims based on sales of the circuit breakers that occurred before 1971, as well as any claim asserted by subsequent purchasers of homes or buildings in which FPE circuit breakers were installed part and denied in part.

DATE OF DECISION: 8/15/02

  
BRYAN D. GARRUTO, J.S.C.

Order is attached

X Proposed form of Order and envelopes to be submitted pursuant to R.4:42-1 by James Crawford Orr.

UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF COLUMBIA

FILED ✓

RELIANCE ELECTRIC COMPANY,  
et al.

SEP 19 1989

CLERK, U.S. DISTRICT COURT,  
DISTRICT OF COLUMBIA

Plaintiffs,

v.

CA No. 87-1478 (HHG)

CONSUMER PRODUCT SAFETY  
COMMISSION, et al.

Defendants.

MEMORANDUM AND ORDER

In this "reverse FOIA" action, the Reliance Electric Company seeks to prevent the disclosure of information related to a Consumer Product Safety Commission (Commission) investigation of circuit breakers manufactured by Reliance's former subsidiary, Federal Pacific Electric Company (FPE).<sup>1</sup> The Commission received Freedom of Information Act requests for various documents describing and analyzing test results, and the raw data underlying those results, that were generated during the investigation. The requesters are primarily plaintiffs' attorneys involved in product liability litigation concerning the circuit breakers.

Pursuant to section 6(b)(1) of the Consumer Product Safety Act (Act), 15 U.S.C. § 2055(b)(1), the Commission

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<sup>1</sup> FPE, formerly a subsidiary of Reliance, is now a unit of the other plaintiff, Challenger Electric Equipment Corporation.

These various reports and analyses were prepared both by Commission engineers and staff and outside organizations, such as the National Bureau of Standards. Reliance argues that release of these documents would be arbitrary and capricious and a violation of the agency's own regulations in two overriding respects. First, it contends that the test results contained in the documents have been refuted by later tests conducted by Reliance.

Next, Reliance argues that the Commission itself rejected the findings of these earlier tests when it announced in a press release that it was ending its investigation.<sup>5</sup>

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calibration tests evaluating the performance of several FPE circuit breaker models which includes engineering laboratory reports, raw data and explanatory memoranda, id. at 5-17 through 5-131, 5-137 to 5-288, 7-59 through 7-62, and 7-150 through 7-153; a National Bureau of Standards (NBS) mathematical model designed to simulate the way electric cables overheat in insulated walls, 5-132 to 5-136, 5-289 to 5-305; an interim report prepared for the Commission by the Wright-Malta Corporation concerning the rate at which two-pole circuit breakers failed Underwriter Laboratory (UL) calibration tests, 7-15 to 7-22; a draft report describing NBS tests to determine whether FPE two-pole 15 amp circuit breakers present a fire hazard when wired to circuits in test walls, 7-53 through 7-62; certain "fire ignition scenarios" developed by the Commission's Department of Engineering, 7-170 through 7-234; a statistical risk analysis, 7-13; and a handwritten staff draft of investigatory options, 7-159 to 7-169.

<sup>5</sup> The preamble to the Commission's regulations states that it will generally not disclose information refuted by other information in its files or information rejected by the Commission itself. 48 Fed. Reg. 57415.

The Court rejects both of these contentions. A review of the Commission's press release shows that the agency did not reject its earlier findings. Rather, the Commission there merely stated that it had insufficient data to determine one way or the other whether Reliance's subsequent tests demonstrated the safety of the circuit breakers and that the agency did not have the resources to make such a finding.<sup>6</sup>

Reliance's other argument concerning accuracy -- that Reliance submitted test data refuting the Commission's earlier tests -- raises a closer question. As noted, Reliance submitted test data that in various ways purports to show that under more "realistic" testing conditions, the

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<sup>6</sup> The press release stated, "the data currently available to the Commission does [sic] not establish that the circuit breakers present serious risk of injury to consumers." It further stated that while the Commission was "concerned about the failure of these FPE breakers to meet [Underwriters Laboratories] calibration requirements, the Commission is unable at this time to link these failures to the development of a hazardous situation." The press release also described Reliance's position, which was that its testing data, submitted to the Commission, showed that its breakers did not create a hazard in the household environment, that the breakers would trip reliably at most overload levels unless operated in a repetitive, abusive manner, and that at those few overload levels where FPE breakers may fail to trip under realistic conditions, currents will be too low to create a fire hazard. The press release concluded by stating that the Commission had "insufficient data to accept or refute Reliance's position" and that given the agency's limited budgetary resources, it would not pursue the investigation further.



## Exxon buys a scandal along with a company

Exxon Corp.'s \$1.2 billion purchase of Cleveland's Reliance Electric Co. last year was designed to give Exxon a base for developing a new energy-saving technology to improve the efficiency of electric motors. What the purchase seems to have bought as well, however, is custody over a burgeoning scandal that involves the charge that defective electrical equipment may have been installed in perhaps 10% of all homes built or renovated over the past decade or more.

The charge, startlingly enough, is being made by Reliance itself. In a little-noticed suit filed in U. S. District Court in Cleveland on June 26, the company accused its own subsidiary, Federal Pacific Electric Co., of having employed "materially deceptive and improper manufacturing, testing, and certification practices" in the production of one of the nation's most widely used lines of circuit breakers. The suit asked the court either

to rescind Reliance's March, 1979, purchase of Federal Pacific from uv Industries Inc. or to order uv to repay the \$345 million purchase price, plus damages.

A week later Reliance notified the Consumer Product Safety Commission (CPSC) that in-house testing of its Stab-Lok line of two-pole, 220-volt circuit breakers indicates that some are prone to failure after repeated use "at relatively low over-current conditions." Reliance says it has not yet determined whether there is a significant hazard in using the device, and there have been few public complaints against it. But the company has stopped shipment of the product and requested distributors to halt further sales until tests are completed. Other unspecified problems also have been identified on three-pole Stab-Lok and molded-case circuit breakers. Says Reliance President B. Charles Ames: "The circuit breaker business at Federal Pacific has virtually ground to a halt."

**Who is responsible?** That may be only the beginning. The items involved cost only \$16.60 apiece. But if the CPSC determines that they should be recalled, the outlay could be enormous since it would require the services of professional electricians. The cost per house could be as much as \$100, trade sources say.

The underlying question in the Cleveland case is who bears the responsibility for this substantial potential liability. The principal defendant is uv Industries, which, after its sale of Federal Pacific, profitably liquidated itself last year over the strong objections of its major stockholder, Sharon Steel Corp. Following the liquidation, Sharon, controlled by Miami financier Victor Posner, bought the remaining assets—and presumably the liabilities—of uv for \$518 million in cash and debentures. Distribution of the proceeds was scheduled to take place on July 21, but Reliance is asking for the imposition of a "constructive trust" to prevent "dissipation" of uv's assets. Aside from Sharon's 22% interest in uv's liquidating trust, most of the company's shares are now in the hands of Wall Street arbitrageurs.

**Procedural delays.** uv Chairman Martin Horwitz strongly denies that he knew anything about Federal Pacific's alleged problems and says the case will be contested. A hearing on a motion to dismiss or transfer the case to New York was set for July 11, probably only the first of a long series of procedural maneuvering.

The Reliance complaint is vague in its allegations of what went on at Federal Pacific. Reliance charges that the company's financial success "was due substantially, if not entirely, to a pattern of materially deceptive and improper practices in the manufacture, testing, and sale" of its circuit breakers. Specifically,

the suit claims Federal Pacific used such practices to obtain certification for its equipment from Underwriters Laboratories (UL), whose label is usually required for a product to meet local electrical codes. The CPSC has not yet been told details of the alleged deceptive practices, but a commission staff engineer who

## Exxon's new company is suing its own subsidiary for 'deceptive' practices

once worked for UL suggests that the practices may have involved rigging equipment at Federal Pacific's own test facilities in a way that would mislead UL's on-site inspectors.

UL professes surprise at the charge that its inspectors were somehow duped, and its general counsel, David Hoffman, insists that "there is no evidence to support the conclusion that products out in the field pose a substantial hazard to the user." Hoffman further says that because relationships between UL and its client, Federal Pacific, are "proprietary," he cannot even publicly confirm Reliance's open statements that its subsidiary's circuit breaker products were delisted after failing various tests.

The delisting occurred after UL changed testing procedures for circuit breakers following CPSC concern that the product might pose fire hazards. The commission last year asked the National Bureau of Standards to design new test equipment to determine performance under actual conditions in the home. The Reliance case could thus turn into an inquiry affecting the entire \$600 million circuit breaker industry.

It was apparently UL's action last fall in delisting nearly 400 circuit breaker labels that started the whole legal process. Reliance says it was originally told that such delisting was routine. But sales had slid so much by early May that it was obvious that the real problem was not the failure of circuit breakers to gain UL approval but "deception" in obtaining certification over a long period of years.

Reliance has suspended with pay Federal Pacific President Harry E. Knudson Jr. and four other key executives. "The men are long-term employees and their integrity is not being called into question," Reliance said in a statement distributed on July 1 to all Federal Pacific employees. Contacted at his home in Watchung, N. J., Knudson refused comment.

# PRICE CHANGE MONITOR

NO. 3111 OCT 13 1968

Cable-Burner, ME-wire, increased prices by as much as 9% on factory-warehouse goods, including, notably, wire and battery effective April 23.

## UL TEMPORARILY SUSPENDS LISTING OF SOME FIRE BREAKERS; CORRECTION SHORTLY

When certain circuit breakers in the Federal Pacific Electric line, including 1 1/2 and 3-pole breakers in N4 and N3 types, were listed by Underwriters Laboratories under revised and corrected procedures earlier this year, they were found to be out of conformance with the specifications of their original UL listing.

UL, with cooperation from FPE, delayed the products, and production was halted. When this occurs, the manufacturer must correct the difficulty before getting retesting and its listing. A UL source said EM that this is more, using the happens from time to time with other manufacturers also.

Sources at Federal Pacific told EM last week that many of the problems have been corrected and production has resumed on a number of restricted circuit breakers. Full production of all listed breakers is expected to be underway shortly. Orders for all of the items in the FPE circuit breaker line are still being filled from stock in regional warehouses. There are not being filled from stock in regional warehouses. There are not affected by the listing, and stock are being shipped to new production moves into direct sales channels.

Adds from obviously missing catalogs, the listing brought on erroneous rumors that caused concern among customers as to whether there could be any question involved in using the UL-listed circuit breaker products now in FPE regional warehouses. UL says there are none. A source there added that UL-listed breakers have been consistently tested at the FPE factory and can be used with full assurance of UL compliance. It was also noted that UL monitoring of the circuit breaker line is no way reflects on other FPE UL-listed products.

EM was told by others that this was an instance where frequent UL monitoring of listed products properly uncovered an unexpected technical irregularity. The electrical industry adopted system worked, as it has done before in similar situations, sources noted. All breaker types leaving the factory have to be in full compliance with testing standards.

-Tom Morris

## CONTINENTAL COPPER BRINGS SUIT AGAINST GROUP THAT HAS ACQUIRED 5% OF ITS STOCK

A complicated law suit has been brought by Continental Copper & Steel Industries, Cranford, N.J., parent company of Rutland Wire & Cable, against an organization and individuals & sources of acquiring about 9% of its stock in the open market last year under circumstances that it considers illegal. The suit, in a New York federal district court, aims to block further acquisition of Continental stock by the group and prevent it from voting the stock it already owns.

The defendants in the suit are R.W. & K. Copper, Inc.,

ELECTRICAL MARKETING—April 7, 1968

New York, a private investment holding company, and four individuals: Herman Rogers, Merwin Wingo L. Aaron Katz and Bernard Katz. Rogers and Wingo have been described in court records as "R.W. & K. Copper." The Katz brothers are said to be partners in an investment in Rutland Wire, Inc., Cranford, N.J., a producer of bare copper wire, and Rogers and Wingo are also said to have an investment in Lutzke, according to Continental sources.

The complaint alleges that required filing with the SEC was inadequate in their description of the identity, background, sources of funds and business of the purchasers.

There is an additional allegation that, because of the relationship of certain defendants with Rutland Wire, constituted a conspiracy of Continental in the complaint. That there is also a violation of securities laws.

## PRODUCERS SUPPORT LIGHTING DISTRIBUTORS WITH STRONG SPOKEN SLATE IN SAN DIEGO

More than 65 regular and associate members attended the second annual meeting of the National Association of Independent Lighting Distributors April 7-10 at the Hotel del Coronado in San Diego. The turnout of active associate members representing more manufacturers of lamps, ballasts and other lighting products, was a substantial plus, according to James F. Busch, executive director. The headquarters of the association (NALLD) is in St. Louis, where Busch is also its electrical manufacturers representative.

About 18 representatives of lighting manufacturers were present and many gave talks. Gary Stephens, of GTE Systron, evaluated the position of the lighting distributor in the marketing climate of the electrical industry and stressed the importance in providing service to small and medium-sized purchasers of lamps and lighting products who may not feel it convenient to deal with the larger national electrical distributor. Roy Jones, a West Coast Westinghouse lighting engineer, spoke on planning commercial and industrial lighting layouts with particular attention to retrofit applications. Bill Arnold and Bob Graham, both of North American Philips Lighting Corp., spoke on sales strategy and techniques for the lighting distributor.

Dave Rankin, of Pacific Lamp Wholesale, Portland, Ore., and Ken Winkler, of Lite-Tronics, Inc., Pittsburgh, a lamp manufacturer, discussed proper applications for well-designed enclosed service lamps. Jules Schwartz, of Universal Mass-Factoring Corp. (Quincy), Princeton, N.J., and Mike Frey, of Moore, Lambert Industries, Los Angeles, a fixture producer, spoke on energy-saving ballasts and conservation through specially designed lighting fixtures. There was also a talk on credit matters by Al Meyer of Data and Syndicate. As reported in a previous EM story (Feb. 5, p. 5), Steve Singer, a St. Louis computer specialist, provided information about how distributors might make use of small computers.

The executive committee elected for 1968 is as follows: Jack Villa, Villa Lighting Supply, St. Louis, chairman; Tom Gower, Gower Lighting Supply, Indianapolis; Phil Rutland, Rutland Lighting Supply, Cranford, N.J.; Ben Hart, Hart Lighting Supply, Phoenix; and Ed Sack, AAM Electric Co., Louisville.

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